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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/722,853

11/25/2003

Don T. Lam

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10/06/2006

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EXAMINER

RUTLAND WALLIS, MICHAEL

ART UNIT

PAPER NUMBER

2835

DATE MAILED: 10/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/722,853

Applicant(s)

LAM, DON T.

Examiner

Michael Rutland-Wallis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

Applicant's amendments to the abstract are hereby entered, and the previous objection is withdrawn in view of the amendments.

Applicant's arguments filed 08/28/2006 have been considered but are moot in view of the new grounds of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 and 15-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Klippel et al. (U.S. Pat. No. 6,917,186)

With respect to claims 1 and 15-16 Klippel teaches an isolation circuit (see Fig. 9), comprising: a control circuit (item 112) to receive as input a power status signal (sample voltages via sensors 116 and 118), said control circuit to output a switch control

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signal (item 128), said switch control signal to comprise a switch close signal if said power status is valid (i.e. no outages, sags, swells or other undesirable characteristics see col. 6 lines 24-30), and a switch open signal if said power status is invalid (see col. 6 lines 30-43 such as the presence of outages, sags, swells or other undesirable characteristics), wherein an invalid power indicates detection of a power status interruption from one power supply (items 116); and at least one switch (SSS1 "solid state switch 1" for example) to connect to said control circuit, said switch to receive said switch control signal and a component signal (waveform signal transmitted to from supply 116 to load) and operate in accordance with said switch control signal, with said switch to prevent communication of said component signal when said switch is in an open state.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-4 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klippel et al. (U.S. Pat. No. 6,917,186)

With respect to claims 2-3 and 19-20 Klippel teaches control circuit receives as input via a signal line. Klippel does not discuss the input as a software event or a

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hardware event. Klippel teaches the system controller item 112 is taught to monitor and control sensors and switches. Klippel is silent on the implementation and generation of the control signal as a software event. It would have been obvious to one of ordinary skill in the art at the time of the invention to use suitable software or hardware event or condition to send the control signal in order to reduce cost or update and change monitoring parameters.

With respect to claims 17-18 Klippel teaches the use of transistor type switches and logic. Klippel is silent on the use of logic high to close the switch or logic low to close the switch. It would have been obvious to one of ordinary skill in the art at the time of the invention to use either logic high or logic low to trigger the isolation in order to use n-channel or p-channel transistors or use a inverter or buffer circuitry.

With respect to claim 4 Klippel teaches further comprising a plurality of switches (SSS1 and SSS2), each switch to connect to said control circuit, said plurality of switches to each receive said switch control signal (item 128) and a component signal (power waveform signal) and operate in accordance with said switch control signal, with said plurality of switches to prevent communication of said component signals when said switch is in an open state.

Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klippel et al. (U.S. Pat. No. 6,917,186) in view of Cowles et al. (U.S. Pat. No. 7,026,646)

With respect to claim 5 Klippel teaches the control circuit receives power from a power supply. Klippel contemplates the use of several types of solid state switches such as a switch, IGBT or a SCR, Klippel does not teach the logic of the switch such that

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when said control circuit fails to receive said power said control circuit drives said switch to an open state. It would have been obvious to one of ordinary skill in the art at the time of the invention to use a normally open logic in order to provide protection to the loads when abnormal conditions arise, Cowles teaches such normally open logic see item 716 in figure 7 for example.

With respect to claim 6 Klippel teaches control circuit and said switch is a solid-state switch such as an IGBT, TRIAC or SCR. It would have been obvious to one of ordinary skill in the art at the time of the invention to use a N-channel MOSFET in order to switch and isolate the supply device.

Claim 7-8 and 10-11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Papa et al. (U.S. Pat. No. 6,175,490) in view of Siewert et al. (U.S. Pat. No. 5,892,999) Papa teaches a typical system with a bus (power bus and communication bus formed with interconnection assembly item 209); a shelf (see shelf holding modules in at least Fig. 1) having a plurality of shelf components (interface, power and control modules); a management module (central processing unit item 103) to connect to said bus, said management module to manage (arbitrate the bus) a plurality of signals communicated between said shelf components. Papa teaches the use of multiple modules wherein Papa teaches in column 4 lines 10-25 faults in the individual modules may be isolated and repaired without disrupting the operation of the remainder of the device. Papa does not disclose the detailed circuitry necessary to perform such operations. Siewert teaches isolation devices (see Fig. 12) and control or management circuitry (items 1240 or 1260) where the control unit monitors via sensing and status

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paths the on or off line status (see col. 11 lines 64-65) and switches the isolation device off. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Papa to include the detailed circuitry see in Siewert in order to provide fault tolerant system to provide power to and protect the supplied devices.

With respect to claim 8 Siewert teaches a control circuit (item 1260) to receive as input a power status signal (item 1280), said control circuit to output a control signal, said control signal to comprise a switch close signal if said power status is valid, and a switch open signal if said power status is invalid; and at least one switch (item 500) to connect to said control circuit, said switch to receive said control signal and at least one of said shelf component signals (power signal) and operate in accordance with said control signal, with said switch to prevent communication of said shelf component signal when said switch is in an open state.

With respect to claims 10-11 Siewert teaches control circuit receives as input via a signal line. Siewert does not discuss the input as a software event or a hardware event. Siewert teaches the system controller item 1240 is taught to regulate and control the protect devices. Siewert is silent on the implementation and generation of the control signal as a software event. It would have been obvious to one of ordinary skill in the art at the time of the invention to use suitable software or hardware event or condition to send the control signal in order to reduce cost or provide a simple transistor logic switch.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Papa et al. (U.S. Pat. No. 6,175,490) in view of Siewert et al. (U.S. Pat. No. 5,892,999) in further

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view of Cowles et al. (U.S. Pat. No. 7,026,646) Siewert teaches the control circuit receives power from a power supply, and Siewert contemplates the use of several types of solid state switches such as a IGBT or a SCR, Siewert does not teach the logic of the switch such that when said control circuit fails to receive said power said control circuit drives said switch to an open state. It would have been obvious to one of ordinary skill in the art at the time of the invention to use a normally open logic in order to provide protection to the loads when abnormal conditions arise, Cowles teaches such normally open logic see item 716 in figure 7 for example.

Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over in Siewert et al. (U.S. Pat. No. 5,892,999) in view of Edelen et al. (U.S. Pat. No. 6,789,871)

With respect to claim 12 Siewert teaches a plurality of switches (item 500), each switch to connect to said control circuit (items 1240 or 1260), said plurality of switches to each receive said switch control signal and a component signal (power waveform signal) and operate in accordance with said switch control signal, with said plurality of switches to prevent communication of said component signals when said switch is in an open state, wherein a logic low signal or no signal from sensing line (item 124) is used to indicate a power offline (see col. 11 lines 64-65) or interruption from the sensed power supply. Edelen also teaches a plurality of switches which are configured to receive a component signal; a control circuit item 340 couple to said plurality of switches and also provides the teaching of dual channel MOSFETs are an obvious substitute for FET relays or other type of switch therefore It would have been obvious to one of

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ordinary skill in the art at the time of the invention to use a dual channel MOSFET in order to reduce line resistance when the switch is in a closed state.

With respect to claim 13 Edelen teaches the logic of an open switch when the power is removed.

With respect to claim 14 Siewert as modified by Edelen render obvious the limitation the control signal is sent to the switch by a software control signal.

Conclusion

Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

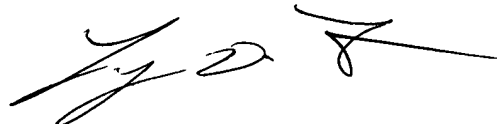
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Rutland-Wallis whose telephone number is 571-272-5921. The examiner can normally be reached on Monday-Thursday 7:30AM-6:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn D. Feild can be reached on 571-272-2092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MRW

A handwritten signature in black ink, appearing to read 'Lynn Feild', with a stylized flourish extending to the right.

LYNN FEILD
SUPERVISORY PATENT EXAMINER